b. PATHOLOGY OF THE NERVOUS SYSTEM AND MIND, AND PATHOLOGICAL ANATOMY.

APHASIA.—The following are the conclusions of a lengthy memoir by Dr. Augusta Tamburini, concluded in the last issue (II. Fasc. V. and VI., Sept.-Dec., 1876) of the *Rivista Sperimentale di Freniatria e di Medicina Legale*:

1. The faculty of language is a complex function, constituted of various elements, isolated in their pathological lesions, which may be put in relief by clinical analysis.
2. Anatomo-pathological researches, based upon a large number of cases, and supported by physiological data, have been able to localize each of the functional moments of language.
3. The memory of verbal images and their co-ordination, which constitute the more intellectual part of language, have their seat in the gray matter of the cerebral hemispheres, and more particularly in the frontal lobes.
4. The transformation of sensory (optic, acoustic, etc.) impressions and their verbal reflexion in a motor impulse toward the extrinsic muscles, has its localization in the marginal convolutions of the Sylvian fissure, and more especially in the third frontal convolution.
5. The route followed by the motor impulse to join the nerves animating the muscles of speech, runs from the convolutions of the insula (which are only the continuation of the marginal ones), by way of the nucleus lenticularis and the corpus striatum, traverses the cerebral peduncles to the protuberance and the medulla in which are found the nuclei of the muscles of phonation.
6. The motor impulse sent to the phonetic muscles is co-ordinated from its point of origin, and it is not needful to look for co-ordinating centres along its course.
7. Neither physiology nor pathology authorizes us to retain the olive as the special co-ordinating centre for speech, to it, and to the bulbar system in general can be attributed the bilateral harmonization of speech as of every other voluntary movement.
8. The lesion of any one of the points in which are located the mnemonic sonorous images of words, in which thus kept they are transformed into motor excitations, and from which they are transmitted as centrifugal impulses to the executive muscles of speech, may produce aphasia of ideation, of transformation, or of execution, and secondly, according as the seat of this lesion is more or less central, the functional disturbance may be more pronounced in the intellectual or in the peripheral phenomena of speech.

9. The facts adduced against the functional localization of speech are explained either by the unilateral predominance of this function, or by the laws of cerebral compensation, and of irritative irradiation.

10. Aphasia, although met with more frequently as a symptom, may nevertheless be studied as a malady of itself, taken in the sense and in cases of simple alteration of one of the elements constituting the function of speech.

CEREBRAL HEMIANÆSTHESIA.—At the meeting of the Soc. de Biologie, Feb. 24 (rep. in *Le Progres Medical*), M. Raymond Tripier reported a series of researches by himself upon incomplete hemianæsthesia of cerebral origin which indicated that the sensory disturbance is in its course like the motor one. The anæsthesia is most pronounced at the terminations of the nerves; pressure upon a part of the skin caused anæsthesia of this and neighboring points. Sensibility persisted in the deeper lying tissues even when lost at the surface.

PERIPHERAL PARALYSIS.—At the meeting of the Physiologischen Gesellschaft of Berlin, Jan. 26, an address was delivered by Herr Bernhardt on the subject of Peripheral Paralysis, which is reported as follows in the *Deutsche Med. Wochenschrift* of Feb. 10:

Our knowledge of the paralysis of peripheral nerves is apparently an acquisition of the most recent times. Only since the introduction of the method of electrical examination into the pathology of nervous diseases, have we been able to obtain a nearer insight into these processes. We distinguish them generally into the light and the severe forms of paralysis. Those forms are called light that reach a complete cure inside of a few weeks, and that in the electrical examination are characterized by perfect retention of the electric irritability of the nerve-muscle tracts, not differing in this from the sound side. Those cases are called severe, in which the irritability of the affected nerve sinks so perceptibly within ten or twelve days, as to be as good as lost entirely for such currents as may be safely employed in living human beings. This is true for the first two or three weeks of the disease in regard to both nerves and muscles, and also for both currents. The speaker then examined the hyper-excitability of the diseased muscles to the galvanic current coming on in the course of the third week, and explained the well-known observations upon the "*Entartungsreaction.*" As especially interesting, he mentioned the condition, appearing at the time of the regeneration of the affected nerve, in which the muscle reacts to the voluntary impulse, or to electric irritation applied above the affected spot, while it still exhibits the "*Entartungsreaction*" to direct galvanic excitation. Erb and the author had recently described another (middle) form, in which this peculiar phenomenon, appearing in severe cases first after the lapse of a month, is present even inside of a week. These facts (the possibility of direct and indirect excitation of the muscles by the faradic current, the "*Entartungs reaction*" of the same with indirect galvanic irritation) led the speaker to think that in this form of paralysis, the muscles might be the points of attack, they thus proving by this condition their own special irritability independent of any nervous influence.

To these three forms of paralysis, the slight, medium severe, and the severe, the speaker associated a fourth, very interesting, from which he very recently (October, 1876,) had observed in two instances. These were in two cases of radial paralysis in men, in whom irritative phenomena were not produced in the extensor muscles (with the exception of the triceps, and in one case also the supinator longus), by the application of either the faradic or the galvanic current at the point of trouble in the radial nerve in the upper arm, or from still higher points (supra-clavicular fossae). Direct irritation of the muscles, on the other hand, by placing one or both electrodes below this point, and on the dorsal aspect of the forearm itself, caused a good, prompt, contraction of the extensors; it seemed indeed as if the contractility at the beginning was even higher than that on the sound side. This occurred with the use of either current, the contractions were instantaneous; there was no predominance of the opening contractions, or that from the closing of the anode, over that from the cathode closing noticed. All this was observed not only between six and ten days after the paralysis, but also after three, four and six weeks, so that we have here a remarkable example of a complete interruption of the conductibility of both voluntary and electrical irritations, with evident integrity of the nerves and muscles below the point of injury. Besides the speaker, only Vulpian and Brenner had hitherto described similar cases, and Vulpian had called attention to the analogy of the phenomena with those of curarized muscles. The speaker suggested that, perhaps in these cases we might infer an influence of cold acting somewhat in the same manner as curare on the terminations of the nerves. This, however, he considered as purely hypothetical. If, since we have not the opportunity for autopsies in these cases, we attempt an explanation on the basis of the data previously afforded by Erb, we must suppose an interruption of nervous conduction at one point in a nerve trunk, sufficient to prevent the passage of any excitation from points higher up in the course of the nerve, but not serious enough to cause the production of the degeneration of the portion of the nerve situated below (towards the periphery) the point of interruption, that is usually observed in such conditions.

THE COLLECTIONS OF WHITE BLOOD CORPUSCLES IN THE CEREBRAL CORTEX.—Herzog Carl, of Bavaria, who, it appears, has chosen the honorable profession of medicine, publishes (*Virchow's Archiv*, LXIX, I, p. 55), the results of a series of microscopic examinations, incited by the discovery of Popoff (*Virchow's Archiv*, LXIII.) of the presence of accumulation of white blood corpuscles in the cortex in typhus and typhoid fever, and the statement of that author that they were also present in the substance of the ganglion cells, causing, in that case, a nuclear prolification of the same. He, therefore, in order to test, as fully as possible, the correctness of Popoff's statements, commenced his examinations on the brains of subjects of typhoid fever, using, as far as possible, the same portions and similar methods of preparation with carmine. Later, he extended his researches into other parts, and also adapted another coloring agent, aniline, which he found more satisfactory. He examined the brains of twenty-two cases of typhoid altogether, and of cases that had had various durations of the disease, while Popoff's cases were only twelve in number, and all of the second week. Our author also examined the brains in various other diseases—measles, pneumonia, phthisis, acute atrophy of the liver, cancer, etc., as well as two perfectly normal brains of individuals who died suddenly from traumatism. He sums up the results of his examinations as follows:

1. White corpuscles are present in the cortex in every brain, even the most normal one.
2. Retarded circulation, with increased watery contents, causes an increased collection of these white blood corpuscles.
3. The corpuscles lie, besides in the perivascular spaces of His and the adventitial canals of Robin, preferably in the periganglionary spaces.
4. They never penetrate the substance of the ganglion cells and produce multiplication of the nuclei of the latter.
5. The cerebral symptoms do not depend upon the presence, nor at all upon the increase of the white corpuscles, nor upon the retardation of the circulation, or the increased watery contents, though they follow in a striking manner, but are to be considered simply as the expression of an acute aggravation of all three moments, for which the fever process and its causes is to be held responsible.

The author closes his paper with a description of the special appearances observed by him in several cases of disease in which he examined the brains, for the details of which we must refer the reader to the article itself.

CEREBRAL COMMOTION.—M. Dumenil (of Rouen) read before the Soc. de Chirurgie, of Paris, Jan. 24 (rep. in *L'Union Médicale*), a memoir entitled *Note to Serve for the Study of Cerebral Commotion.* He sought to show in this paper, which was based upon two observations with autopsies performed with the minutest care, "that we cannot refer all cases of cerebral commotion to contusion of the brain; that in a certain number of cases we can only distinguish, of important lesions, those that follow disorders of the circulation; that these troubles, which should be explained by paralysis of the vaso-motors, are the direct cause of death by their generalization, and especially by the impediment that they cause in the pulmonary circulation, and that consequently we should consider them as the characteristic of cerebral commotion, undergone by the central nervous system, or, in other words, as the effects of profound perturbations in the vaso-motor functions. This is somewhat analogous to the relation, admitted by M. Verneuil, between hernial strangulation and pulmonary congestion, with the difference that we may suppress, in such cases as those of M. Dumenil, the intermediation of the reflex acts."

SUDDEN DEATH FROM EXCITATION OF THE PNEUMOGASTRIC AND LARYNGEAL NERVES.—At the meeting of the Soc. de Biologie, December 2, (rep. in *Gas. des Hopitaux*) M. Bert, *apropos* to the instances recently reported of death following thoracocentesis, recalled his experiments performed many years ago, in which he had found simple excitation of the nasal, superior laryngeal, or pneumogastric nerves in animals, to cause not merely arrest of respiration, but even sudden death. Death in these cases is never the result of syncope or asphyxia. For example, if we compress the trachea of a duck, a hard-lived animal, as is well known, death instantly occurs. Five minutes later the muscular contractility is gone, and cadaveric rigidity very quickly appears. M. Bert is disposed to attribute the result in these cases to a commotion in the floor of the fourth ventricle, to a shock bearing on the vital knot by a centripetal action having for its point of departure an irritation of one of the above mentioned nerves. The majority of cases of sudden death that have been observed, either from foreign bodies in the larynx, or following ammoniacal cauterizations of the pharynx, or even after the ingestion of ice, are evidently, according to M. Bert, instances like those he has mentioned. And, finally, may not the sudden deaths in typhoid fever be explained better by these facts than by reflex action starting from the intestines.

NEURITIS.—Prof. H. Nothnagel, *Volkmanns Samml. Klin. Vortræge*, No. 103, (abst. in *Deutsche Med. Wochenschr.*) Prof. Nothnagel adds to the account of a case of traumatic tetanus, in which, in spite of indications of abnormally increased irritability of the implicated median and radial nerves, the autopsy showed no trace of an inflammatory process, an extended account of the characteristic symptoms for the diagnosis of neuritis as it occurs in the sensory, motor, or mixed nerves. We must recognize an inflammation of a nerve, (1) if in an indubitably peripheral disorder in the tract of a mixed nerve, zoster and disorders of sensibility appear simultaneously; (2) if there occur trophic disorders of the hair, nails, skin; (3) if there is continuous pain increased by pressure on the nerve; and, (4) if anæsthesia appears within a few days. In neuritis of a mixed nerve, motor paralysis may or may not occur; the same is the case with muscular atrophy; still, the occurrence of the latter indicates neuritis. Redness of the skin, fever, and increased electric irritability, are less constant.

The secondary affections caused by ascending or descending neuritis, are especially important, as has been directly shown by the experiments of Tiesler, Feinberg and Klemm. Still, the progression of the anatomical process cannot be demonstrated in all cases, the abnormal irritative condition in an inflamed nerve appears rather to be able to induce these secondary affections in predisposed individuals, without gross lesion.

In conclusion, the author discusses the conjectural connection of progressive muscular atrophy, reflex paralysis, secondary (reflex) epilepsy, as well as chorea and the reflex psychoses, with primary neuritic processes.

RELATIONS BETWEEN THE MOTOR DISORDERS OF GENERAL PARALYSIS AND CORTICAL LESIONS IN THE FRONTO-PARIETAL CONVOLUTIONS.—At the session of the Acad. de Médicine of Paris, Dec. 5, (rep. in *L'Union Médicale*), M. Foville, *fils*, (of Rouen) read a paper, of which the following are the conclusions:

1. General paralysis of the insane has for its pathognomonic characters, in a symptomatic point of view, constant disorders of motility; and in an anatomical point of view, a constant alteration of the cortical substance of the fronto-parietal convolutions.

2. The most recent works have been inclined to attribute the troubles of motility in general paralysis, to histological modifications, more or less pronounced, in the medulla and in the cord; no relation of cause and effect can therefore be established between the constant anatomical lesion and the equally constant symptomatic manifestations.

3. The discovery by Hitzig and Ferrier of an excitable motor region on the surface of the convolutions of the median part of the cerebral hemispheres, permits us to establish this relation.

4. The existence in the excitable region of the convolutions of distinct cortical motor centres for the movements of the superior members, the inferior members, the neck, head, tongue, jaws, face, lips, the orbit and the eyelids, enables us to localize with exactitude the ataxias, the convulsions, the contractures, and the partial paralysis limited to such, and such of these organs in general paralysis.

5. It is by the excitation that causes, in these various motor centres, the initial hyperæmia of the disease and the congestive obstructions in its intermediate stage, and next by the progress of the sclerous degenerations of the period of decline, that we can explain the progressive motor troubles, such as the embarrassment of speech, the fibrillary spasms of the lips and cheeks, the ataxia and dissociations of movement in the members, the grinding of the teeth, the contraction or dilatation of the pupils, the convulsions limited to a single muscle or to a few muscles; the unilateral epileptiform attacks, the partial or transient hemiplegias, the persistent contractures, and, finally, the more or less complete paralysis.

6. In conclusion, in general paralysis, the cortical lesions of the fronto-parietal convolutions are the direct cause of the motor troubles; and upon the localization and intensity of these lesions depends the locality and the intensity of the spasmodic and paralytic accidents.

DISTURBANCES OF SENSIBILITY IN ATAXIES.—The following are the results of a series of observations on the disorders of sensibility in ataxies, made at the Salpêtriere by M. P. Oulmont, and reported by him to the Soc. de Biologie, Feb. 17, (*Gaz. des Hopitaux*). His procedure was to make a figure of the patient, and to mark on these with colored crayons the anæsthetic patches. From these designs, the comparison of about twenty unselected ones, taken as they happened, permitted the deduction of the following conclusions:

1. The disorders of sensibility, (that to pain is here alone considered), are nearly constant.

2. They are scattered over the entire body, the head even being implicated in a majority of the cases.

3. They are generally disposed with a kind of symmetry, especially manifested on the body and limbs.

4. They occupy in each portion of the body certain points of election. On the head these are the cheeks and supra-orbital regions, while the neck is almost invariably free. On the trunk they are the bosom, the omoplates and the lumbar region, while the sternal region is more frequently intact. In the superior as well as in the inferior members, the lesions of sensibility are more extended and more advanced toward the periphery than nearer the centres. The islets of healthy skin occupy in preference the fold of the elbow and the palm of the hand, and in the upper extremity, and the internal aspect of the thigh in the inferior members.

This division of the anæsthetic patches seems characteristic of tabes dorsalis, and M. Oulmont had been able to make it useful, in two doubtful cases, in confirming the diagnosis.

THE SYMPTOM NUMBNESS.—The following is a part of a clinical lecture by Dr. S. Weir Mitchell, reported in the *Med. and Surg. Reporter*, Dec. 2, 1876.

A man (it is nearly always a man) overworked, or a student who has used his mind too steadily at the age of growth, begins to have, and it is usually in the spring-time, tingling of the hands and feet. Very often I can find no sign of anæmia or of remarkably lowered health, all the functions are in order, and the appetite and digestion are sometimes faultless, but nearly always the heart is irregular, in spells, especially at night. Then also there is sure to be a sense of weight or pain in the occiput. The numbness is purely subjective. It at times invades the whole skin, and the face and scalp are favorite sites. It is here felt in islands, and with it there is often a feeling as if the facial skin was drawn tight. The numbness in these cases is sometimes intense, and the prickling feeling so great as to be painful. I have heard one sufferer remark, that he had once been poisoned with aconite, and that the formication was like that which he then felt.

When this "all-asleep feeling" is most vivid, there is apt to be with it a noise in the head, a faint singing, which is not usually referred to the ears, but is felt in the occipital region, with considerable irregularity of the heart's action. In the graver cases, the finger-tips often burn severely, and there are at times in the hands and feet islets of vasal dilitation. More or less insomnia and general nervousness completes my picture, or rather my sketch.

The numbness which this curious neurosis presents, although most alarming to the patient, is really free from danger; yet also, it is an obstinate malady, unless at the outset it be broken up by some complete change in habits, occupation or residence. After awhile it is not readily relieved, or rather cured, even by travel abroad, but is apt to return again and again. The regular life of a well-ordered water cure, with mild use of spinal douches or shower baths, I have seen of great value, but I do not know of a single water cure in America which commands the full confidence of the profession, and, unluckily, travel in Europe is not at every one's disposal.

I am puzzled in many of these cases by the fact that the patient seems to be in a good state of physical vigor, so that tonics appear not to be indicated, and are, indeed, as a rule useless; but riding on horseback, exercise afoot, the life of the camp in summer, utter revolution in the ordinary habits—these forms of tonic are serviceable when used with discretion, and one of them, the out-door camp life, is in the power of a vast number of our people.

I have said that you would find this group of symptoms obstinate and troublesome under any treatment, but you will also find that the cases you do not cure get well as time goes on, the changes in life or habits, or the natural revolutions which time effects in all of us, being often sufficient to cure.

There is another form of numbness which may or may not be free from dysæsthesia. I think I mentioned it a few weeks ago in connection with a case of general nervousness; at all events I have been frequently consulted for it. It belongs only to the night, and cannot be confounded with that numbness, with loss of power, which comes of sleeping with the arm bent in some awkward position, or so situated that it is subjected to pressure on one of the main nerves. Of this we see almost every week good examples, but the form of trouble I now desire to recall to your attention is rare.

The last case seen at this clinic was a middle-aged woman, who was in rather feeble health; now and then she awakened with numbness of the whole side, left or right. She was not clear as to whether it affected the face or not. After an hour or more it gradually faded away. Sometimes it affected a single limb, but this was rare. I used to fear this symptom and suspect that it might presage a true hemiplegia, but I have now seen it so often in people who suffered no evil consequences, that I have ceased to dread it. It usually yields to tonics, and is one of the many nameless neuroses which are seen by busy city physicians, and which require that general fortifying of the system which is the most effectual means of dealing with such disorders as grow out of the constant strain and struggle to which modern civilized life subjects those who are involved in its vortex.

When this symptom, numbness occurs in the daytime, as a unilateral trouble, and is associated with headache, or noises in the head, and is found also in the face, and involves some thickness of speech, it is a graver matter. When, also, it occurs in people past fifty, and when there is with it any tendency to inco-ordination of movements in the hand, and the least trace of lessened sense of tact, it should at once put the physician on his guard. Then there is another question to solve. If the patient be weak and anæmic the path is plain, and we need to use good diet, cod-liver oil, and tonics. If there be grave valvular disorder of the heart, we may suspect that a minute embolus has entered one of the vessels, and so affected the blood-supply of the regions in or near the opposite side of the optic thalamus, or the posterior parts of the corpus striatum. But if the sufferer be a vigorous man, in general good health, with or without distinct evidence of altered vascular walls, there is one remedy which I am sure is of value. It is simply a change of diet to milk, and vegetables and fruit, and a total abandonment of all meats. I do not mean to pause here to reason on the why and the wherefore of this treatment. I can only assure you, from long experience, that it is of the utmost value, and that the change is often followed by a continued sense of relief from the numbness, and from all feeling of pressure and fullness. Of course as every one knows, the organic palsies of the spine are apt to set out with sensations of numbness in the feet. These at first, are often unassociated with true, or at least with perceptible changes in the capacity to feel or to localize touch, although this is apt very soon to follow, and to end in more or less dysæsthesia. There is no need to dwell on such well known facts. I should like, however, to remind you that lead poisoning sometimes gives rise to formication, that ague-poisoning sometimes assumes this disguise, and that both, in Bright's disease and saccharine diabetes numbness of the limbs may be met with. I have seen within a week, illustration of both of the latter causations.

A lad of eighteen consulted me last week for formication of the feet, without dysæsthesia. He told me that he had had, three years before, scarlet fever, followed by slight general œdema, but the water had not been examined. The left eye ground showed three small splotches of old retinitis, and he had evidence, of mitral regurgitation. The urine was highly albuminous, and had in it an abundance of fatty and granular casts; also the feet were slightly swollen. Under the use of skimmed milk diet, with tincture ferri in full doses, the numbness is already much better, and the œdema has gone.

Numbness from diabetes is a yet more serious symptom because it is associated with true anæsthesia, and is due, I believe, to plugging of the peripheral blood vessels. I have seen it but two times in this disease; once it was a simple subjective sense of formication, and once it was a grave trouble, resulting in gangrene of one foot and death. Sometimes, however, the slough is local and small, and recovery takes place. I have thus run over some of the rare causes of numbness, and some of the more common ones, but wherever it exists, you will do well to study it thoroughly, because, whether it has been as a mild tingling, without dysæsthesia, or as a profound and lasting symptom, with grades of lack of feeling, it is always a valuable symptom when viewed with the other signs, which it in turn helps to make clear.

The sensation of prickling, of being asleep—in a word of numbness in its various forms and degrees—is due always to a slight irritation of the nerves, or their connected nerve centres, so that at any point of a nerve track, from the sensory ganglia to its ending in the skin, a slight irritation will give the referred sensation we have been discussing. In the extremities we can cause it by rolling a nerve under the finger, or by an electric current through it, or by freezing the nerve at any point; and thus, in the chapter of accidents, tumors, pressure from any cause, blow, wounds, anything which slightly hurts without destroying, may cause numbness. So too in the centres, all disturbances of nutrition from imperfect circulation, or from small emboli, may cause it, while it is probable that the intrusion on the brain of small aneurysmal dilatations of minute vessels, such as Charcot has described, may have a like result, and, also, it seems, that in the presence of increased blood pressures this symptom may get worse. Numbness is often associated with other forms of what Erb calls paræsthesia, as distinguished from dysæsthesia, and hyperæsthesia. Among these are sense of local constriction, of burning, of elongation of the limb, a very rare symptom, but nearly all of these curious forms of morbid feelings are due to cerebral disease, and will repay a fuller study and a more detailed description.

NEURALGIAS AND VISCERAL NEUROSES IN CEREBRO-SPINAL DISEASES.—M. Teissier, *pere*, (of Lyons) read a paper on the neuralgias, etc., occurring in the course of cerebro-spinal disorders before the French Association for the Advancement of Science, at its last meeting, the substance of which is thus abstracted in the *Union Médicale*, Sept. 26.

Visceral disorders are met with alike in the first period of general paralysis and of sclerosis of the anterior columns; M. Teissier has observed them, in fact, in a case of angina pectoris, which for many months had marked the commencing symptoms of diffuse encephalitis, in gastric attacks with hæmatemesis, likewise at the commencement of general paralysis; in a case of violent and paroxysmal enteralgia in a lady who afterwards became paralytic; in two cases of convulsive bronchitis, resembling in all respects hooping-cough, and lasting several months in ataxic patients; in many cases of extreme frequency of the pulse with irregularity, without appreciable cardiac lesions; in one isolated case of neurosis of the heart, of which the attacks were later replaced by epileptiform crises.

ATROPHY OF THE GLUTEAL MUSCLES.—At the session of the Paris Academy of Medicine, July 8, 1876, M. Onimus called attention to the atrophy of the gluteal muscles which he had observed in different affections, loco-motor ataxia, traumatisms, sciatica, etc., and which is very likely to be overlooked from the situation of the muscles themselves. The cause of this atrophy may be multiple; myositis, neuritis, etc., may combine to produce it. It is never due to mere disuse, which may cause diminutive but never active atrophy. Electricity, the constant current especially was, the most efficient curative measure.

INVOLUNTARY BACKWARD MOVEMENTS IN DISEASE OF THE BRAIN. Fr. Pengoldt *Berliner klin. Wochenschr*, Sept. 18, 1876, gives an account of a case, in which at the close of a lingering pulmonary affection, among other cerebral symptoms, there appeared a backward motor impulse; when the patient attempts to move forwards, he actually progressed backwards.

This was observed only at a late period of the disease; paralysis and unconsciousness supervened in a few hours and the patient died.

The autopsy revealed chronic left pachymeningitis, meningeal tuberculosis, old encephalitic traces (yellow patches) in the left frontal and temporal lobes, tubercle in the white substance of the right occipital lobe, and a recent one the size of a pea in the pons. There was also tuberculosis of the lungs with other morbid appearances, and tubercles in the pericardium, liver, spleen, kidneys, and large intestine.

Of all these lesions, the author thinks only one, the tubercle of the pons can be held answerable for the symptoms of backward propulsion noted in the patient. They have not been observed in previous cases of the other lesions, and though the characteristic symptoms of those of the pons have not all as yet been determined with positiveness, he thinks that this spinal symptom of backward propulsion in this case is probably caused by the participation of that part in the general disease in this case. No cerebellar lesion is reported that might account for the phenomenon here.

INFLUENCE OF HEREDITY IN THE PRODUCTION OF CEREBRAL HEMORRHAGE.—At the session of Paris Academy of Medicine, Sept. 19 and 26, 1876, (rep. in *Bull. gen. de Thérapeutique*) M. Dieulafoy read a paper in which he demonstrated that cerebral peri-arteritis, with its consecutive miliary aneurysms, causing cerebral hemorrhage, is only, in fact, an abnormality of nutrition, a substitution of tissue, affecting the contractile and elastic elements in the vascular walls. The vicious impulse given by the nutritive activity at the formation of the individual, is latent for a while, and manifests itself at different epochs. Here, as in all hereditary maladies, as in general paralysis, phthisis or cancer, it has a latent period of an indefinite duration of many years, twenty, forty, sixty years, and even more, and its manifestation, which, happily, is not always fatal, varies according to circumstances favorable or otherwise to the latency of the affection.

M. Dieulafoy summed up his memoir as follows:

1. The disease of cerebral hemorrhage is hereditary.
2. It causes in the same family sometimes apoplexy, sometimes hemiplegia; and the severity of the accidents, the rapidly fatal issue, when it occurs, are only subordinate to the localization of the cerebral lesion; it usually occurs at an advanced age; nevertheless it rather often attacks several members of the same family at various periods of life; it is not rarely observed in a family that the young are attacked before the aged.

The following are the titles of other recent papers on the Pathology of the Nervous System and Mind, and Pathological Anatomy:

LILIENFELD, Two Cases of Apparently Simple Hemicrania, terminating in Death, *Wiener Med. Presse*, No. 50, 1876; WITKOWSKI, The Melancholic Initial Stage of Insanity, *Berliner Klin. Wochensch*, No. 50, 1876; PALLEN, Some Suggestions with Regard to the Insanities of Females, *Am. Jour. of Obstetrics*, April; MACDONALD, General Paresis, *Am. Jour. of Insanity*, April; ACH. FOVILLE *fils*. The Relations between the Troubles of Motility in General Paralysis and Cortical Lesions in the Fronto-Parietal Convolutions, *Annales Méd. Psych.* January; DAGONET, Moral Insanity and Intellectual Insanity, General Considerations and Classification, *Ibid;* BUZZARD, Sciatica, *Practitioner*, February; DOWSE, Diphtheritic Paralysis, *Ibid*, March; MACGREGOR, A New Form of Paralytic Disease, associated with the presence of a New Species of Liver Parasite, *Glasgow Med. Journal*, January; DELASIAUVE, Classification of Mental Diseases on the Double Basis of Psychology and Clinical Observation, *Le Progres Médical*, March 3.

c.—THERAPEUTICS OF THE NERVOUS SYSTEM AND MIND.

BROMIDE OF POTASSIUM.—Krosz, *Arch. f. exp. Path. u. Pharm.* (Abst. in *Revue des. Sci. Méd.*)

This inaugural dissertation begins with a critical review of previous memoirs. Then Krosz analyzes the symptoms experienced by himself and many of his friends, after the administration of gramme doses of bromide of potassium. It is a new confirmation of already known facts. In effect, he observes a sensation of warmth, and of weight on the stomach, with generally an abundant intestinal flux, cephalalgia, anæsthesia of the pharynx, with decrease of the salivary secretion, a very plain enfeeblement of the intellectual faculties, and finally a slight lowering of the temperature, and slowing of the pulse.

Never any diplopia nor myopia. Occasionally eruptions of acne and of erythema nodosa.

Experiments upon animals confirm the facts already known; it is a sedative, and hypnotic paralysis of the heart that appears to be the cause of death.

Is this action due to the bromine or to the potassium? To solve this problem, Krosz administered to a number of healthy adults, successively, thirteen grammes of chloride of potassium, and seventeen grammes of bromide of sodium. In these doses the bromide of sodium contained as much bromide, and the chloride of potassium as much potassium as the previously employed dose of bromide of potassium. These experiments prove that bromide of potassium combines the action of bromide of sodium and chloride of potassium. They also permit us to determine the part played by each of the elements of the potassic salt.

It is the metal that produces the paralysis of the cardiac muscle, the retardation of the respiration, and the reduction of temperature, the para-